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CANADA MORTGAGE AND HOUSING CORPORATION

Date Released: June 2018

"The survey allows us to better understand how home buying is influenced by attitudes and perceptions, giving rise to sustaining local narratives. As we can see, psychological drivers can be at odds with economic fundamental drivers".

Guillaume Neault,
Senior Manager, Analytics
Housing Research

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Homebuyer choices, bidding wars, and social influences: results from the homebuyer motivation survey

Executive Summary:

This report seeks to provide a deeper look into the results of the homebuyer motivation survey initially presented in the longer study *Examining Escalating House Prices in Large Canadian Metropolitan Centres*. The survey was developed as a response to gaining a better understanding of key drivers of rapid price growth in the markets of Vancouver and Toronto. Rapid price growth can lead to exuberance among market participants and manifests itself through excessive expectations of future price growth. Thus, CMHC designed and administered a questionnaire to 30,000 recent homebuyers in Vancouver, Toronto, and Montréal with main objective to survey buyers' attitudes and perceptions about market drivers. Summary results show:

- In both Vancouver and Toronto, 48% of homebuyers respectively spent more than they budgeted on their home purchase while only 24% of homebuyers in Montréal exceeded their budget.
- About 55% of buyers experienced a bidding war in Toronto and Vancouver, which is much larger than the 17% recorded in Montréal.
- 68% of respondents in Vancouver believe foreign investors have a lot of influence in driving up home prices while 48% of respondents in Toronto believe foreign investors have a lot of influence driving up home prices.
- Statistics Canada reported the share of non-resident ownership across all properties is 4.8% in Vancouver and 3.4% in Toronto.
- In Vancouver, the influence of investors is perceived to be stronger than conventional factors such as supply constraints and demand side factors.

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Introduction

Canada Mortgage and Housing Corporation's (CMHC) report *Examining Escalating House Prices in Large Canadian Metropolitan Centres* (EEHP) identified three fundamental factors associated with the rapid price growth observed over the period 2010-2016. During this period, higher disposable incomes, positive population growth and low mortgage rates explained nearly 75% of house price increases in Vancouver and about 40% of house price increases in Toronto. In addition, the report identified housing markets with sustained price growth can lead to excessive optimism among market participants. Home price growth is being taken for granted by homebuyers and home sellers. Optimistic long-term expectations deviate from the fundamental factors explaining price growth and pose a risk to the stability of the housing market as a whole. In reviewing the literature on the causes of the US housing bust, Case, Shiller, and Thompson (2012) observed that "what happens in the housing market depends on the behavior and attitudes of millions of individual participants, and foremost among them are homebuyers... Understanding the housing market is really about understanding what goes on in the minds of buyers, and we chose to go directly to the source.[1]"

The Survey Instrument

To address these concerns, CMHC designed a survey to gain a better understanding of what motivates homebuyers and to understand how homebuyers structured their choices through the purchasing process. Specifically, the questionnaire zeroes in on how individuals relate to local market conditions during the purchase process; measures the degree to which social groups and external influences impact the perception of homebuyers' behaviors, measures homebuyers' expectations on future home prices, and finally, compares how homebuyers value alternative investment vehicles.

The questionnaire was mailed to 30,000 households who purchased a home in Montréal, Toronto and Vancouver Census Metropolitan Areas (CMA) in 2017. One of the early hypotheses CMHC developed was that variation in price change should be somewhat proportional to the optimism of homebuyers in each CMA[2]. CMHC identified Toronto and Vancouver because of its rapid price growth and identified Montréal as a control group because its price growth has been moderate. In selecting these three CMA areas, CMHC designed a survey experiment to explore the relationship between homebuyers' price expectations and actual house price growth and also the variation of this relationship across CMAs.

Respondents were given two weeks to access the questionnaire via a secured website provided in the mail out invitation. A follow up phone call was scheduled for those who failed to respond within a two week period. The response rate was strongest in Montréal with 998 surveys completed, followed by Vancouver with 664 and Toronto with 497. The survey is statistically representative of homebuyers in each CMA in 2017[3]. In a nutshell, this means the responses collected reflect the population as a whole. Thus, the results presented below on homebuyers can be generalized to the population of Vancouver, Toronto, and Montréal.

Initial insights gained from the survey were released in the EEHP as part of a chapter entitled *Exploring Canadian Homebuyers' Behaviours and Expectations: An Application of Behavioural Economics.*

Key findings from this chapter can be summarized as follows:

- More than half of homebuyers in Toronto and Vancouver reported experiencing a bidding war.
- Those who bought a single-detached home and experienced a bidding war in Toronto and Montréal spent a premium of $125,000 and $55,000, respectively on their home purchase.
- Vancouver is an exception. Those who experienced a bidding war spent less by $200,000 for a single-detached home.

Bidding wars occurred frequently for apartment condominiums, where prices are lower than the median purchase price for all properties.

- Results show median long-term homebuyers' expectations in Vancouver, Toronto, and Montréal are in line with past price growth. Focusing on mean long-term expectations yield larger values suggesting a segment of the respondents hold more optimistic views.
- Lastly, purchasing a property involves synthesizing information from various sources. Foreign and domestic investors are perceived to have a large influence on home prices in Vancouver and Toronto[4].

These three findings are the departure points for this report. As such, CMHC's main objective is to deepen our understanding of the survey results by examining more closely:

- the characteristics of homebuyers who participated in a bidding war
- the relationship between purchase budget and choices made by homebuyers
- social influences and perception on home prices

Overview of the Survey Sample

Before doing so, CMHC provides an at-a-glance summary of the respondents to highlight the regional differences in the survey results. As expected, the CMAs of Vancouver and Toronto report a significant price differentials with the Montréal CMA across all dwelling types.

Table 1

Purchase price of dwelling types across CMAs	Single-detached	Semi-detached	Townhouse	Low rise apartment	High rise apartment
Vancouver					
Mean	$1,368,150	$952,341	$628,777	$461,877	$630,355
Median	$1,199,327	$828,581	$555,404	$415,599	$549,459
Std. Deviation	$24,132	$97,454	$26,004	$14,524	$15,922
Observations	206	19	93	183	163
Toronto					
Mean	$1,024,236	$833,728	$591,800	$500,582	$454,955
Median	$873,787	$749,218	$561,497	$388,050	$396,256
Std. Deviation	$20,219	$22,194	$20,568	$72,826	$9,296
Observations	223	55	59	10	150
Montreal					
Mean	$391,943	$456,779	$383,872	$279,046	$331,312
Median	$328,688	$327,382	$320,788	$234,461	$297,336
Std. Deviation	$8,080	$23,024	$21,484	$7,602	$16,022
Observations	571	109	63	214	95

Source: CMHC

Table 2

Buyer experience and purchase price	Mean	Median	Std. Deviation
Not first time homebuyers, n=1277	$831,193	$718,568	$11,687
First time homebuyers, n=946	$538,631	$438,988	$9,932
Vancouver			
Not first time homebuyers, n=384	$1,010,854	$848,241	$17,111
First time homebuyers, n=290	$636,059	$499,134	$20,188
Toronto			
Not first time homebuyers, n=304	$881,714	$782,778	$17,973
First time homebuyers, n=196	$581,673	$515,700	$14,324
Montreal			
Not first time homebuyers, n=589	$420,280	$345,667	$6,414
First time homebuyers, n=460	$302,180	$269,968	$4,778

Source: CMHC

Looking at sales across all dwelling types in Table 1, show repeat buyers spend more than first-time homebuyers, probably because they have more built-up wealth. Table 2 compares the mean and median prices and show repeat buyers spend between 50 and 70% more than first-time homebuyers in Vancouver and Toronto. In Montréal, this figures declines to between 30 and 40%.

Table 3				
Single-detached home by buyer experience	**Mean**	**Median**	**Std. Deviation**	**Proportion of buyers**
Vancouver				
First time homebuyers	$1,303,338	$1,228,881	$60,583	15.86%
Repeat buyers	$1,390,343	$1,199,221	$27,520	41.41%
Toronto				
First time homebuyers	$842,441	$734,392	$42,629	25.00%
Repeat buyers	$1,078,348	$918,306	$26,568	56.58%
Montreal				
First time homebuyers	$311,172	$274,916	$8,228	38.48%
Repeat buyers	$434,503	$370,762	$12,076	57.56%

Source: CMHC

Table 3 draws a similar comparison by contrasting the purchase price of only single-detached homes and buyer experience. In Vancouver, specifically, first-time homebuyers and repeat buyers relatively spent the same amount on a single-detached home. In Toronto, the difference in mean and median hovers between 25 and 28%. Lastly, in Montréal, the difference in mean and median remains in the range of 36 and 40% between first-time homebuyers and repeat buyers. One fascinating question, which cannot be answered here, is to investigate why little difference in price exists between first-time homebuyers and repeat buyers of single-detached homes in Vancouver.

The last column of the table looks at the proportion of first-time homebuyers who purchased single-detached homes. While first-time homebuyers in Montréal buy a single-detached home to a greater proportion than their peers in Toronto or Vancouver, more work is necessary to understand what causes the differences among first-time homebuyers across CMAs.

If it is assumed preferences are fixed across all three CMAs, many plausible scenarios such as geographic differences in the fundamental drivers, supply of singles for sale, composition of the housing stock, or access to cash[5] could shed light on the differences in proportions.

Table 4			
Allocating scarce resources...	**Vancouver**	**Toronto**	**Montréal**
I paid less than I planned	5.84%	5.88%	11.03%
I paid about what I planned	43.94%	44.11%	63.12%
I paid more than I planned	47.91%	47.79%	23.67%
I didn't have any budget	2.31%	2.21%	2.18%
Observations	**675**	**497**	**1050**

Source: CMHC

Budgeting for the Home Purchase

One of the strengths of the survey was its focused questions on the choices made by households prior to the purchase. This enabled the respondents to reflect upon the choices made after the purchase process. For instance, respondents were asked about whether how much they paid was in line with their planned budget. Respondents were also asked about a series of choices regarding location, size and timing of purchase – choices all potential homebuyers must consider before buying a home.

In both Vancouver and Toronto, 48% of homebuyers respectively spent more than they budgeted while only 24% of homebuyers in Montréal exceeded their budget. What is interesting about these statistics is to identify why homebuyers in Vancouver and Toronto reported spending significantly more than homebuyers in Montréal. Two hypotheses come to mind. First, it can be hypothesized buying a home requires experience managing household finance. Thus, first-time homebuyers should be more likely to exceed their spending budget[6] than repeat buyers. The data fails to support this hypothesis – both first-time homebuyers and repeat buyers report similar likelihood of exceeding their budget. A second hypothesis would be to suggest it is the dwelling type that is pushing homebuyers to exceed their budget. Here again, the data fails to support this hypothesis.

The data suggests the fear of missing out hypothesis could have an impact on buyers' budget[7]. The survey looks at the timing of purchase by asking people if they bought sooner than expected or later than expected[8].

Buying sooner than expected may reflect a lack of information about the market, thereby pushing up the initial budget for fear of missing out in a market where prices rise. Buying later than expected may reflect the inability to buy at the desired price, which would inevitably require buyers to revise their budget in an upward fashion. While the data cannot support a strong conclusion on this question, homebuyers in Toronto and Vancouver who reported buying a home before they anticipated or after they anticipated making a purchase were more likely to exceed their budget than homebuyers who did not alter their timing[9].

Bidding wars and the impact on housing price

Homebuyers measure the value of a home through rule of thumb mechanisms. "It's a hot market, I can't miss out, it's really tight right now – we will have to revise our budget if we want to get in" all are phrases pushing homebuyers to overvalue an investment. For behavioural economists Bondt and Thaler, overreacting to data likens to lacking self-control[10]. The CMHC survey looks into bidding wars as a prime example of lacking self-control. Admittedly, participating in a bidding war entails risks: sale price typically exceeds asking price, offers from competitive buyers are exclusively privy to the sellers, and the window to make a decision to present an offer is condensed, sometimes a few hours after the open house. The playing field is uneven. Would-be buyers are at a disadvantage, but nonetheless they participate. When they do, there are consequences for buyers and sellers. Once the price is realized and available for realtors and the general public to see, it becomes an additional reference point for other buyers and sellers. What is odd with bidding wars is we don't know if the purchase price represents the value we would see in a conventional transaction. In a bidding war, the price reflects an auction with blind bids disrupting conventional transactions where the seller receives an offer from one single buyer.

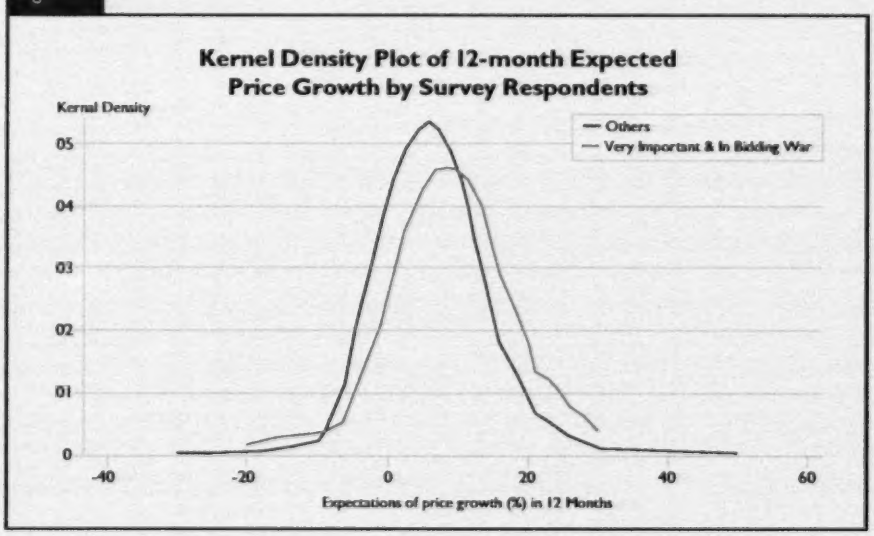
Bidding wars are very common in tight markets. The survey results show about 55% of buyers experienced a bidding war in Toronto and Vancouver. This is much larger compared to the 17% recorded in Montréal. Bidding wars tend to report a higher median price too of approximately 20% in Toronto and 13% in Montréal[11]. For buyers of single-detached homes in Toronto and Montréal, the premium paid is 20% and 10% on the median price, respectively. The effect is opposite in Vancouver, however. The median price of single-detached homes is 15% lower for buyers who reported experiencing a bidding war. The bulk of bidding wars were reported in segments of the market where prices were below the median

Table 5

The cost of bidding wars	Mean	Median	Std. Deviation
Vancouver			
Not first time homebuyers = 312	$933,470	$690,330	$23,683
First time homebuyers = 371	$793,197	$649,996	$19,966
Toronto			
Not first time homebuyers = 219	$694,551	$577,394	$25,699
First time homebuyers = 284	$816,194	$722,765	$16,617
Montreal			
Not first time homebuyers = 870	$354,292	$299,480	$4,086
First time homebuyers = 182	$433,459	$344,817	$18,109

Source: CMHC

Figure 1



Source: CMHC

purchase price, especially in the apartment condominiums. The survey results highlight the self-reinforcing relationship between bidding wars and optimism. Homebuyers who experienced a bidding war in Montréal and Vancouver are more likely to report that future price growth is very important. Having more optimistic short-term price expectations goes in hand with valuing price growth. The graph shows those who experienced a bidding war and highly value future growth have higher short-term price expectations than respondents who did not report participating in a bidding war. This would suggest buyers rationalize their purchase because of expected future growth.

Who's influencing your purchase?

CMHC's survey results confirms the strong perception foreign and domestic investors driving up prices. Nearly 68% of respondents in Vancouver believe foreign investors have a lot of influence in driving up home prices while 48% of respondents in Toronto believe foreign investors have a lot of influence driving up home prices. In Vancouver, the influence of investors is perceived to be stronger than supply constraints and demand side factors, both quantified and estimated in the EEHP as key variables explaining price growth.

Table 6

Employment Growth	No influence	Very little influence	Some influence	A lot of influence
Vancouver	8.10%	26.44%	48.43%	17.03%
Toronto	6.33%	18.56%	48.86%	26.24%
Montréal	4.14%	12.90%	47.92%	35.05%
Population Growth				
Vancouver	1.28%	6.49%	40.84%	51.39%
Toronto	2.44%	5.57%	37.43%	54.56%
Montréal	2.86%	8.70%	49.51%	38.94%
Land scarcity				
Vancouver	3.71%	10.57%	32.78%	52.94%
Toronto	7.81%	14.03%	33.94%	44.22%
Montréal	6.35%	13.01%	37.58%	43.06%
Foreign Investors				
Vancouver	1.27%	6.36%	24.56%	67.80%
Toronto	3.81%	12.71%	35.60%	47.88%
Montréal	5.24%	13.44%	39.02%	42.31%
Domestic Investors				
Vancouver	1.09%	8.53%	44.06%	46.33%
Toronto	2.98%	9.45%	39.46%	48.11%
Montréal	4.68%	18.49%	50.93%	25.90%

Source: CMHC

In Toronto, the perceived influence of investors is more in line with supply constraints and demand side factors. In a separate survey, Statistics Canada reported the share of non-resident ownership is 4.8% in Vancouver and 3.4% in Toronto for all property types[12]. The results in the homebuyer motivation survey cannot be compared directly with the results in the survey on non-resident owners. But what is striking is the significant gap between perceptions of the public and available data, so much so that the perception of non-resident ownership takes centre stage when discussing the drivers of price growth[13].

In closing, the works of Robert Shiller on narrative economics sound prescient to describe what could be happening in the local imaginary of homebuyers. The human brain has a natural draw toward stories whether they are factual or not. As he suggests, stories are powerful instruments to share information and reproduce narratives with economic impact. It is still a challenge for economists to quantify and measure the impacts of narratives on the housing market, but it is a challenge we will seek to address[14].

METHODOLOGY FOR HOME BUYER MOTIVATION SURVEY

CMHC conducts the Home Buyer Motivation Survey, to facilitate quantitative research on behaviours of recent home buyers to determine the impact of their opinions and motivations on housing prices. This large-scale survey targets consumers who recently purchased a residential property in Toronto, Montreal and Vancouver Census Metropolitan areas, and has two intended purposes:

- Collect data on home buyer behaviours and influential factors involved in their purchasing decisions;
- Support in-depth statistical analysis on how well the home buyers understand the housing market, and whether their behaviours reflect long-term characteristics of the housing market; CMHC selects a random sample of approximately 10,000 residential properties that were sold within the past 12 months (for 2017 survey, properties sold between July 2016 and June 2017 were included) in each of the three target CMAs.

The data is collected using a questionnaire developed by CMHC. The questionnaire contains about 30 questions, including mostly multiple-choice questions, rating scale questions, and fill-in-the-blank questions. A mix of online questionnaire and computer-assisted telephone interviews (CATIs) is used to collect the data. The collection period is from mid-September to mid-October.

ENDNOTES

[1] Case, K., Shiller, R.J and A. Thompson (2012). "What Have They Been Thinking? Home Buyer Behavior In Hot and Cold Markets," NBER, Working Paper 18400.

[2] This hypothesis stems from the results obtained by Case, K. Shiller, R.J and A. Thompson (2012) in "What Have They Been Thinking? Home Buyer Behavior In Hot and Cold Markets."

[3] It is assumed, however, characteristics of homebuyers are homogeneous across markets, thereby making finer grain analysis also representative. For example, this means the behaviour of homebuyers reflect the population as a whole, but we assume the behaviour of first-time homebuyers reflect the population as a whole too.

[4] We conclude the report with a discussion contrasting the perception of foreign investors driving up home prices versus objective data collected by CMHC and Statistics Canada on the share of non-permanent ownership.

[5] Cash is meant to be understood as having access to payable or non-repayable loans from friends or families.

[6] A counterpoint to this argument is that first-time homebuyers' financial resources are often much more constrained than repeat buyers who hold equity. As such, the relatively fixed budget of first-time homebuyers provides a clearer picture of what they can afford.

[7] We evaluate the "fear of missing out" by examining whether buyers bought sooner or later than planned.

[8] We also provided the option to answer "I didn't have a preferred time" and "I purchase when I felt it was the right time".

[9] It is worth noting this pattern is observable in Montréal only for those who purchased later than planned.

[10] Bondt, W.F.M and R.Thaler (1985) "Does the stock market overreact," Journal of Finance, 40, 3, 793-805.

[11] We need to assume homes that went for bidding wars were initial priced at similar levels as other properties. This assumption is reasonable, as most of the bidding wars are specific to dwelling types: single-detached homes in Montréal and Toronto, and apartment condominiums in Vancouver.

[12] As part of its Canadian Housing Statistics Program, Statistics Canada reported the share of non-resident ownership of condos is closer to 7.9% in Vancouver.

[13] The question regarding the influence of foreign and domestic investors could be interpreted as being broader than sole ownership. Respondents could interpret the question as what is the influence of foreign capital in driving up home prices. Much more work must be completed to gain a better understanding of the scale of foreign capital in Canadian housing markets.

[14] Shiller, R. (2017) "Narrative Economics", Cowles Foundation Discussion Paper No.2069.

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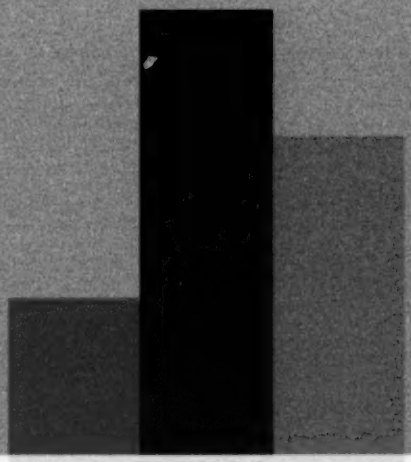

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